

What is claimed is:

1 1. A system of indicating a message size, comprising:
2 a controller adapted to receive a first message containing a data portion
3 and an indication of a size for the data portion,
4 the controller adapted to modify the indication to indicate a different size
5 for the data portion.

1 2. The system of claim 1, wherein the controller is further adapted to
2 determine a maximum size of data capable of being communicated along a downstream
3 path, the controller modifying the indication based on the determination.

1 3. The system of claim 1, wherein the data portion size indication comprises
2 a Transmission Control Protocol maximum segment size indication.

1 4. The system of claim 1, wherein the controller is further adapted to receive
2 the first message from a client system over a local area network.

1 5. The system of claim 4, wherein the controller is further adapted to receive
2 the first message from the client system over an Ethernet network.

1 6. The system of claim 1, wherein the first message comprises an Ethernet
2 frame.

1 7. The system of claim 6, wherein the data portion of the Ethernet frame
2 carries an Internet Protocol packet.

1 8. The system of claim 1, wherein the controller is further adapted to
2 transmit a second message containing the modified indication.

1 9. The system of claim 8, wherein the first message comprises a first data
2 portion and a first control portion, and wherein the second message comprises a second

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3 data portion and a second control portion, the second data portion carrying a control
4 element not carried in the first data portion.

1 10. The system of claim 9, wherein the control element in the second data
2 portion comprises a Point-to-Point Protocol control element.

1 11. The system of claim 9, wherein the control element in the second data
2 portion comprises a Point-to-Point over Ethernet control element.

1 12. The system of claim 8, wherein the data portion size indication comprises
2 a Transmission Control Protocol maximum segment size, wherein the maximum segment
3 size in the first message indicates a length of 1,460 bytes and the maximum segment size
4 in the second message indicates a length of 1,452 bytes.

1 13. The system of claim 1, wherein the controller is further adapted to modify
2 the indication based on usage of a predetermined communications protocol.

1 14. The system of claim 13, wherein the predetermined communications
2 protocol comprises a Point-to-Point over Ethernet protocol.

1 15. The system of claim 1, wherein the indication indicates a maximum size
2 for the data portion.

1 16. A method of indicating a message size performed by a system,
2 comprising:
3 receiving a message containing a data portion and an indication of a length
4 of the data portion; and
5 adjusting a value of the indication to indicate a different length.

1 17. The method of claim 16, wherein adjusting the value of the indication is
2 based on a characteristic of a link between the system and another node.

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1 18. The method of claim 17, wherein adjusting the value of the indication is
2 based on a maximum message size supported by the link.

1 19. The method of claim 17, wherein adjusting the value of the indication is
2 based on usage of a predetermined communications protocol in the link.

1 20. The method of claim 19, wherein adjusting the value of the indication is
2 based on usage of a Point-to-Point over Ethernet protocol in the link.

1 21. The method of claim 16, wherein receiving the message comprises
2 receiving a message having a Transmission Control Protocol maximum segment size.

1 22. The method of claim 16, wherein the indication indicates a maximum
2 length of the data portion.

1 23. An article comprising at least one storage medium containing instructions
2 for indicating a message size, the instructions when executed causing a system to:
3 receive a message containing an indication of a size of at least a portion of
4 the message; and
5 modify the indication to indicate a different size.

1 24. The article of claim 23, wherein the indication comprises a TCP maximum
2 segment size indication.

1 25. The article of claim 23, wherein the instructions when executed cause the
2 system to determine the size of the portion of the message supported by a
3 communications path and to modify the indication based on the determination.

1 26. The article of claim 23, wherein the instructions when executed cause the
2 system to modify the indication based on whether a predetermined communications
3 protocol is employed in a communications path.

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1 27. The article of claim 26, wherein the predetermined communications
2 protocol comprises a Point-to-Point Protocol.

1 28. The article of claim 26, wherein the predetermined communications
2 protocol comprises a Point-to-Point over Ethernet protocol.

1 29. The article of claim 23, wherein the instructions when executed cause the
2 system to transmit a second message containing the modified indication.

1 30. The article of claim 29, wherein the instructions when executed cause the
2 system to receive another response message having a size dependent on the modified
3 indication.

1 31. A data signal embodied in a carrier wave and containing instructions for
2 indicating a message size, the instructions when executed causing a system to:
3 receive a message containing a data portion and an indication of a length
4 of the data portion; and
5 adjust a value of the indication to indicate a different length.

1 32. A method of indicating a message size, comprising:
2 receiving a message containing a maximum segment size value;
3 determining a maximum data size supportable by a link between the
4 system and another node;
5 comparing the determined maximum data size with the maximum segment
6 size value; and
7 modifying the maximum segment size value based on the determination.

1 33. The method of claim 32, wherein comparing the determined maximum
2 data size comprises computing a maximum segment size value and comparing the
3 computed maximum segment size value with the maximum segment size value in the
4 message.

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1 34. The method of claim 32, further comprising sending a message containing
2 the modified maximum segment size value over the link.

1 35. The method of claim 32, wherein receiving the message comprises
2 receiving a message containing a Transmission Control Protocol header that contains the
3 maximum segment size value.

1 36. An article comprising at least one storage medium containing instructions
2 for indicating a message size, the instructions when executed causing a system to:
3 receive a message containing a maximum segment size value;
4 determine a maximum data size supportable by a link between the system
5 and another node;
6 compare the determined maximum data size with the maximum segment
7 size value; and
8 modify the maximum segment size value based on the determination.

1 37. A system for indicating a message size, comprising:
2 means for receiving a message containing a maximum segment size value;
3 means for determining a maximum data size supportable by a link
4 between the system and another node;
5 means for comparing the determined maximum data size with the
6 maximum segment size value; and
7 means for modifying the maximum segment size value based on the
8 determination.

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